NavMed 369

UNITED STATES NAVY

MEDICAL NEWS LETTER

Editor - Captain L. B. Marshall, MC, USN (RET)

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Graduate Training in Navy Hospitals

Applications for assignment to residency training duty are desired from Regular medical officers and those Reserve medical officers who have completed their obligated service under the Universal Military Training and Service Act, as amended. The following chart lists those Navy hospitals which currently have vacancies at the first year level, and the specialties in which these vacancies exist. Vacancies are also available at other than first year levels. Information concerning non-first year appointments may be obtained by correspondence addressed to the Chief of the Bureau of Medicine and Surgery.

	Bethesda, Md.	Chelsea, Mass.	Oakland, Calif.	Philadelphia, Pa.	Portsmouth, Va.	San Diego, Calif.	St. Albans, N. Y.
Anesthesia	x	x	x				
General Practice		x			x		
Internal Medicine		x		x	x	x	x
Neurology	x			x			
Orthopedics	x	x					
Otolaryngology			x	x			
Pathology	x		x	x		x	
Pediatrics			x				
Psychiatry	x		x	x			
Radiology	x	x	x			x	
Surgery ***					x	x	x
Urology						x	
Cardio-Vascular Diseases	x						

*** Residency training in General Surgery is currently open to Regular officers only.

Letters of application for first year assignments should be forwarded via official channels to the Chief of the Bureau of Medicine and Surgery, and should include an obligated service agreement prepared in accordance with the provisions of BuMed Instruction 1520.7.

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Policy

The U.S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be nor susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

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Notice

Due to the critical shortage of medical officers, the Chief, Bureau of Medicine and Surgery, has recommended, and the Chief of Naval Personnel has concurred, that Reserve medical officers now on active duty who desire to submit requests for extension of their active duty for a period of three months or more will be given favorable consideration.

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Treatment of Mass Civilian Burn Casualties

On March 31, 1954, twenty burn casualties were admitted to the emergency rooms of the Edward J. Meyer Memorial Hospital, Buffalo, during a 30-minute period. The case material was somewhat unique in that all casualties were in the same age group (10 to 12 years), all burn wounds were sustained almost simultaneously, and flame burns were responsible for the injury in each instance. The mode of handling these cases is the subject of this article emphasizing the need for civilian general hospitals to be prepared to meet such disaster demands.

The school fire victims were screened as they entered the emergency department by a senior surgical resident. Eleven of the twenty were estimated to have in excess of 20% body surface burns and were, therefore, kept in the emergency treatment rooms of the admissions department. The remaining nine were sent immediately to surgical wards.

With the use of full aseptic technique, the patients were placed on sterile drapes, all clothing removed, and sterile drapes were placed over the entire body with the exception of the head and extremities used for infusions. No further attention was given to the burn wounds at this time.

One or more intravenous infusions were started immediately by the easiest reliable route. Fifteen cut-down procedures were required in the eleven serious casualties.

In all instances, the above emergency measures were completed within 45 minutes after admission. Large quantities of whole blood were supplied by the American Red Cross Regional Blood Center so that all serious cases were receiving either Type O Rh-negative blood or type-specific blood within the 45-minute period. Although several cases showed transient hypotension, only one patient developed clinical shock, a patient with 100% body area burn, mostly deep third degree.

Records were begun by the first-aid teams on admission, including estimates of burn distribution, depth, and total area, and pulse and blood pressure recordings at 10-minute intervals.

A systematic program of laboratory control was set up under the supervision of a medical resident. It included the following specific points:

1 Sufficient blood was cross matched for each patient to meet the estimated needs for the first 24 hours.

2 Technical personnel were mobilized to provide hourly capillary hematocrit readings on a 24-hour basis.

3 Inlying catheters were placed in all serious cases. Urine volumes were measured every hour, and urine specific gravity was determined every three hours.

Intravenous fluid requirements in the early phase were estimated by Evans' formula but were revised upward in many instances. Whole blood, serum albumin, and saline comprised the major intravenous fluids. Plasma was not available in this hospital at this time because the hazard of transmission of serum hepatitis with the current methods of processing was felt to be prohibitive. The first three postburn hours were utilized in administration of fluids in such quantities and of such composition that blood pressures were maintained; evidence of peripheral vasoconstriction did not appear, and hematocrit values began to fall. Only after the foregoing criteria were satisfied, was definitive care to the burn wound considered.

Under complete asepsis in the operating room, occlusive petrolatum gauze pressure dressings were applied. No anesthesia was required, and only small amounts of sedation were required during this and the preceding phase. Close observation for signs of respiratory tract burns revealed no indications for tracheostomy during this period, although five patients had extensive deep facial burns. Similar dressings were applied immediately to the burn wounds of the less severely burned upon arrival on the surgical ward, because, in these cases, intensive fluid therapy to combat shock was not required.

Aqueous penicillin, 100,000 units every three hours, was the only antibiotic begun prophylactically. Tetanus toxoid was given to those children who had previously been immunized, but antitoxin was not used in the others.

Spontaneous slough of all devitalized tissue was allowed to take place, aided only by daily soaks and what slight debridement could be carried out with no anesthesia. Three weeks were required before all tissue had declared itself, and only then was grafting carried out. Thin split-thickness grafts (0.013 in.) were removed with an electrodermatome and were sutured in place on the granulating areas with multiple interrupted nonabsorbable (silk) sutures. Areas about joints and about the face were covered first. No more than 100 sq. in. of skin was removed at a single operative procedure; thus, multiple grafting procedures were necessary. Occlusive pressure dressings were applied only to the areas grafted, granulating areas being left uncovered.

Rapid screening of cases with prompt disposition becomes as important in a civilian general hospital under mass casualty conditions as it is in a military medical installation on the battlefield. After screening, 50% of the cases were found to require 95% of the time. Efficient use of personnel and facilities can be accomplished only by such screening.

The rigidity of the screening must depend upon the total number of casualties and the treatment facilities available. In these cases, mortality figures coincided with the usual reports: i.e., rarely does a victim survive a burn in excess of 50% body surface, and rarely does a victim die with a burn of less than 20% body area even with little or no treatment. It becomes obvious then that a civilian general hospital, faced with handling 200 to 2000 casualties instead of 20, must make its screening increasingly more rigid. Burn casualties of 20% body area or less could not even be admitted if the total casualty figure ran into the thousands. By the same token, no manpower or supplies could be expended in trying to save the burn casualty with total body area burn in excess of 50%.

Based on this experience, the authors proposed the following principles for the care of mass civilian burn casualties:

1 Administrative planning. The basic machinery of a civil defense disaster program must be set up in advance.

2 Rapid screening is the first prerequisite for effective handling of mass burn casualties.

3 Equipment for the performance of a large number of cut-down infusions is required to care for mass casualties.

4 Administration of large quantities of whole blood is inadvisable in the early postburn period while hemoconcentration is severe.

5 Plasma or a plasma expander should be the predominant fluid administered intravenously early in the postburn period. A safe method for processing and preserving human plasma in large quantities remains a critical need in the civil preparedness program.

6 Tracheostomy should be performed immediately in patients with severe burns of the face and neck without awaiting signs of respiratory difficulty.

7 None of the presently available antibiotics is capable of preventing, or of effectively treating, postburn infection.

8 A method of "open" handling of burn cases which differs in several essential respects from the conventional "open" method is described.

9 The mortality from serious burns has probably changed little in the past 10 years.

(Schenk, W.G. Jr., et al., Treatment of Mass Civilian Burn Casualties: Arch Surg., 71: 196-201, August 1955)

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Traumatic Rupture of the Esophagus

Traumatic rupture of the esophagus is a catastrophic accident which is increasing in frequency and one that is associated with prohibitive mortality and morbidity unless early diagnosis, vigorous resuscitation, and definitive surgical therapy are carried out. The pathologic anatomy of the lesion may vary considerably with the rupturing agent, whether it be by diagnostic or therapeutic endoscopy, an ingested foreign body, a penetrating missile, or by an intrinsic force engendered by the patient himself. The previous pathological state of the esophagus may also greatly influence the type of surgical therapy to be employed: i.e., drainage, a primary repair, or resection and anastomosis.

Of thirteen cases of traumatic perforation of the esophagus treated by the authors from July 1950 to June 1953, eight were due to diagnostic or therapeutic endoscopy or bouginage; one occurred in the pyriform fossa during attempted passage of a Levin tube with the patient under endotracheal anesthesia; and four were due to penetrating injuries of the neck.

All patients were subjected to operation as soon as possible after the diagnosis was made and resuscitative and supportive therapy had been started.

Ten cases had primary repair with excellent results other than small temporary fistulas which developed in three cases: The duration of perforation prior to repair in those developing fistulas was 44 hours, 24 hours, and 28 hours respectively.

Mediastinotomy and drainage were done in two cases. Case I had posterior mediastinotomy and intrathoracic underwater-seal drainage for massive infected pleural effusion and tension pneumothorax 28 hours after perforation. The patient died on the eighth postoperative day. Case II had cervical drainage of a high mediastinal abscess 32 hours following perforation during biopsy of a high thoracic esophageal carcinoma.

The ages of the patients ranged from 16 to 88 years. The time intervals from perforation to surgery varied as extensively as did the ages, ranging from 1-1/2 hours to 44 hours.

Of the eight endoscopic perforations, five occurred immediately below the cricopharyngeus sphincter on the posterior esophageal wall, one occurred through a stricture immediately above the esophageal hiatus, and in the two in which drainage only was done, the site was in the cervical or upper thoracic esophagus but the opening was not visualized. All four of the penetrating esophageal injuries occurred in the cervical segment.

The authors' experience paralleled that of others in finding that prompt diagnosis, rapid resuscitation, surgical exploration with debridement of contaminated fascial planes, definitive repair of the esophageal defect, and vigorous postoperative supportive therapy are followed, in a large percentage of cases, by rapid and relatively uncomplicated recovery, from this previously highly fatal accident. (Overstreet, J. W., Ochsner, A., Traumatic Rupture of the Esophagus: J. Thoracic Surg., 30: 164-180, August 1955)

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Chlorpromazine in Head Injury

The antiemetic and tranquilizing properties of chlorpromazine have proved to be of great value in the management of acute and postalcoholic states. The high incidence of head injuries in the alcoholic population makes it important to determine whether the use of chlorpromazine, a central nervous system depressant, might be contraindicated in the presence of head injury, or whether it may be a more desirable sedative than those currently available. This report concerns its use in the management of patients with head injuries.

Sedatives and analgesics are highly desirable and, sometimes, necessary adjuvants in the management of patients with head injuries. Unless such agents are employed to relieve pain or reduce excitement, some of these often irrational patients may become extremely difficult to manage and may possibly even suffer additional trauma. An ideal sedative for such cases should allay excitement without causing stupor. It should not mask signs of existing or progressing neurological damage; it should materially relieve the patient of pain and should not have undesirable properties or side-effects less directly pertaining to the central nervous system.

In all cases studied, this drug produced satisfactory tranquilization, even in those instances of excitement due to head injury without acute alcoholism. In several subjects, lumbar puncture and x-rays of the skull were readily performed after the administration of chlorpromazine, although active resistance had made these procedures impossible beforehand. There was little difficulty in retaining intravenous infusion needles, nasal oxygen tubes, or urethral catheters, and nursing procedures were greatly facilitated.

Evidence did not indicate that chlorpromazine in therapeutic concentrations had any adverse effect upon the respiratory mechanism. In none of the cases in this series, nor in any of more than 500 other subjects receiving chlorpromazine, did the authors observe any evidence of respiratory depression. The drug did not appear to aggravate cerebral edema or intracranial bleeding. The single fairly common, undesirable side-action of chlorpromazine was its tendency to produce hypotension and tachycardia. With rapidly increasing intracranial pressure due to acute cerebral edema or intracranial bleeding, an increase in blood pressure is a compensatory mechanism for maintaining adequate cerebral circulation. Hypotension, resulting from the administration of chlorpromazine, might, theoretically, be harmful in such cases. Fortunately, in most instances, the reduction in blood pressure produced by chlorpromazine is of slight-to-moderate degree and unlikely to have any adverse effect upon cerebral circulation. Moreover, the occasional patient who demonstrates a marked hypotensive response, usually does so with the first dose of chlorpromazine, presumably at a time sufficiently early so that an expanding lesion would not have placed him in maximum danger. In this series, vascular collapse attributable to chlorpromazine was not observed.

In the authors' experience, the optimum initial dose of chlorpromazine ranges between 25 and 50 mg., depending upon the degree of hyperactivity of the patient. Occasionally, with extreme excitement, a dose of 100 mg. may be indicated. It is usually necessary in the cases under consideration to administer the drug by deep intramuscular injection, following which appreciable effects are demonstrable in about 30 minutes. If there appears to have been no significant effect, the dose may be repeated within an hour. The indications for subsequent administration depend chiefly upon clinical observation. Usually, a single dose will be effective for approximately 4 to 6 hours. The amount administered should depend upon the quantity previously determined necessary for sedation and the clinical state of the subject. (Shea, J.G., Alman, R.W., Fazekas, J.F., The Use of Chlorpromazine in the Management of Patients with Head Injury: Arch. Int. Med., 96: 168-171, August 1955)

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Long-Term Antimicrobial Therapy Without Lung Collapse

Of mounting importance in recent years, has been the increase of pulmonary tuberculosis among older persons, particularly white males.

The treatment of pulmonary tuberculosis in these older individuals carries with it definite clinical problems. Not the least of these is the lessened response of the older patient to antimicrobial therapy. Pulmonary

lesions in these individuals tend to have a more productive, fibrotic, or fibrocavernous nature, with less of an exudative component and, as such, respond less well to chemotherapy. Lowering of pulmonary function by the destruction of lung tissue, fibrosis and emphysema often impairs the ability of the older patient to tolerate minor or major collapse procedures or resectional surgery.

As a result of these various factors, sanatorium beds are being occupied in ever-increasing number by older individuals, mostly white males, the nature and extent of whose disease places them in a definite salvage category.

Sixty of these salvage patients were placed on long-term continuous antimicrobial therapy without collapse in the hope that a certain number might be rendered noninfectious and that at least a few might be prepared for discharge from the sanatorium. For the most part, they were white males over 40 years of age with far advanced, bilateral, fibrocavernous disease of long standing; patients with poor prognosis who had failed to respond to the then accepted standards of therapy. With persistence in this practice, a total of 137 salvage patients now have received continuous antimicrobial therapy for one year or longer without collapse.

Similarly treated were 163 with less advanced, less fibrotic, less destructive disease of shorter duration, the so-called nonsalvage or regular type of admission. This is the group in which drug therapy, with or without surgery, was expected to be definitive.

The comparison in the response of these two groups to long-term antimicrobial therapy without collapse forms the subject of this article.

All of the 300 patients reported received continuous antimicrobial therapy for 12 months or longer with no collapse procedures or surgical intervention. Those who were discharged or surgically treated before the completion of the full year of antimicrobial therapy, are not included in this study.

Long-term antimicrobial therapy was applied to two classes of patients. In the nonsalvage group with less destructive disease, the objectives of therapy were the usual ones: cavity closure, sputum conversion, and preparation for discharge or definitive surgery. In the majority of cases reviewed in this article, these objectives were reached fairly rapidly and completely.

Among the salvage patients, however, the aims of treatment were quite different. The advanced, bilateral, destructive nature of their disease precluded hope of early discharge or surgical attack. In many instances, destruction of lung tissue was so great that it would have been genuinely unrealistic to aim for complete restoration of health. Rather, the authors set up a modified objective for these patients: the establishment and maintenance of a state of noninfectiousness which not only would protect the sanatorium personnel but which, in certain instances at least, would allow

the patient's return to more or less normal living conditions at home without hazard to others. As was expected, radiographic response in these salvage patients has not been great. Spreads and x-ray deterioration, however, have been marked by their relative absence; clinical and symptomatic improvement have been gratifying; and deaths from tuberculosis have been astonishingly few. Under prolonged therapy, moreover, sputum conversion by culture has been achieved in over three-fourths of these individuals and there have been surprisingly few bacteriologic relapses. Actually, for these poor prognosis patients, the achievement of stable roentgenograms, negative sputum cultures, and acceptable clinical status represents a goal which in the pre-chemotherapeutic era was considered highly satisfactory for all patients and should constitute today a primary objective in treating this growing class of sanatorium patients. (Steininger, W. J., Howard, W. L., Long Term Antimicrobial Therapy Without Collapse: 300 Cases of Pulmonary Tuberculosis Treated for One Year or Longer: Dis. Chest, XXVIII, 177-186, August 1955)

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Agammaglobulinemia in the Adult

Agammaglobulinemia, the absence of both plasma and extravascular gamma globulin, has recently been found to be associated with unusually poor resistance to infection in certain patients. The defect, which may be congenital or acquired, is more precisely described as a total lack of immunoglobulins because the antibody portion of the beta-2 globulins is absent as well as the gamma globulins, and the defect involves not only acquired antibodies but also such normal inherited antibodies as plasma hemagglutinins. The deficiency appears to be the direct result of an inability to synthesize immunoglobulins because, in some such patients, administered gamma globulin has been shown to have a normal or prolonged half-life.

Agammaglobulinemia is accompanied by a high mortality and a high incidence to repeated acute, and later chronic, infections of lung, liver, and gastrointestinal tract. It is, therefore, not surprising that the majority of patients described to date have been children. However, a rapidly increasing number of reports of agammaglobulinemia in the adult are appearing, representing both the congenital and acquired forms of the syndrome. Agammaglobulinemic females are included among these cases.

The diagnosis of agammaglobulinemia can be easily made because the clinical manifestations are highly suggestive and, once the possibility has been considered, simple laboratory tests quickly establish or refute the diagnosis.

Agammaglobulinemia should be suspected when there is: (1) History indicating inadequate resistance to infection. Such patients usually give a history of repeated acute episodes of pneumonia, otitis media, meningitis, hepatitis, and enterocolitis. Bronchiectasis, chronic hepatitis or sprue-like syndromes may be fully developed when the patient is first seen. (2) Failure to develop clinical immunity or expected laboratory evidence of antibody production after adequate antigenic stimulus. There may be a definite history of two attacks of a disease which normally confers permanent immunity, such as rubella or mumps. Before, during, and after an infection with a known specific organism, no significant titer of antibody is demonstrable in the serum. Furthermore, no antibody response follows challenge with known potent antigens. Skin tests of the tuberculin type remain negative, and the Schick and Dick tests are persistently positive. (3) An unexpectedly normal result with a laboratory test which depends upon abnormalities in serum gamma globulin. The thymol turbidity, cephalin-cholesterol flocculation and colloidal gold flocculation tests are normal although the patient's status suggests they should be abnormal. The Kunkel "gamma globulin" is low when normal or high values would be expected, and the Howe A/G ratio is high when normal or low values would be expected. (4) An absence of normally inherited plasma isohemagglutinins.

Diagnosis is established by demonstrating the absence of serum gamma globulin by specific chemical or electrophoretic technics.

Normally, about 13% of the total serum protein consists of gamma globulins, chiefly immunoproteins, together with a considerable quantity of "nonspecific" gamma globulin of as yet unknown significance. Certain antibodies, including blood group isohemagglutinins, typhoid "O" agglutinins, and true Wassermann reagin are also found in the beta-2 globulin fraction. The normal adult has approximately 25 gm. of circulating gamma globulin in dynamic equilibrium, with an equal quantity of extravascular gamma globulin. The serum level of gamma globulin appears to be closely related to adaptive processes. It is relatively high at birth, presumably due to transplacental transmission of antibodies, falls for several months, and, thereafter, rises slowly as the individual comes into contact with immunizing diseases. Adult levels are not reached for over two years.

Replacement therapy with human gamma globulin has been reported effective in controlling the principal manifestations of this syndrome. Affected children have been maintained free of sepsis on weekly injections of gamma globulin and prophylactic penicillin. Apparently, it is neither necessary nor practical to achieve normal blood levels of gamma globulin to prevent infection. Gitlin noted that levels of only 100 to 150 mg. per 100 ml. are effective. This is fortunate, because it may be calculated that an adult would require about 25 cc. of the commerical 15% gamma globulin per day for complete replacement. The material cannot be administered intravenously because of severe hypotensive reaction, and intramuscular

injections of over 20 ml. are prone to cause chills, fever, myalgia, and faintness. Because the virus of homologous serum jaundice is not associated with the gamma globulin fraction, there is little danger of serum hepatitis, even with prolonged administration. (Young, I. I., Wolfson, W. Q., Cohn, C., Studies in Serum Proteins - Agammaglobulinemia in the Adult: Am. J. Med., XIX: 222-230, August 1955)

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Aminopterin for Psoriasis

Aminopterin (4-amino-pteroylglutamic acid) is a potentially dangerous drug. It can favorably affect the lesions of psoriasis regularly, but the range between beneficial and toxic doses is narrow. The possibility of irreversible bone marrow aplasia is of chief concern in toxicity.

Aminopterin was given to 171 ambulatory patients with psoriasis. All had received conventional therapy of one or many forms, usually over a period of many years. No attempt was made to select cases except that treatment was not given during pregnancy because the drug is abortifacient. The youngest patient was 6 years of age, the oldest 77, and the average age was 41 years. The average duration of the disease was 10 years.

Five treatment schedules were used, each tablet being 0.5 mg. given orally: I. One tablet daily for 6 days. II. One tablet daily for 6 days, one week rest, then one tablet daily for 6 days. III. One tablet daily for 12 days. IV. Two tablets daily (morning and night) for 6 days. V. Two tablets daily for 3 days, then one tablet daily for 6 days.

Seventy-two patients (of 171 treated) had complete clearing of skin lesions, usually within 2 to 3 weeks. Seventy-one were greatly improved and 28 had no benefit.

A majority of the patients had clearing of the lesions or much improvement with whatever schedule was used. Roughly speaking, 70% of patients on Schedule I had clearing or great improvement of their lesions, 75% on Schedule II, and 90% each on Schedules III and IV. However, the highest proportion of favorable results was obtained at the cost of increased incidence of toxic effects.

Twenty-four patients in the entire group experienced toxic effects, the commonest being sore mouth (17 patients), and erosions of involved skin (7 patients). Two of the 24 had temporary depression in the white blood count, and 2 experienced temporary intensification of the cutaneous lesions (with subsequent complete and lasting involution of the psoriatic lesions). Although toxic effects generally occurred in various combinations, this was not necessarily so, because every toxic manifestation occurred singly in at least one case.

The greatest number of toxic effects occurred with Schedule IV (0.5 mg. twice daily for 6 days), there being 16 patients out of 48 so treated who experienced unfavorable reactions, 11 having sore mouth, 7 with temporary alopecia, 5 with skin erosions, and 2 each with temporary leucopenia and intensification of the lesions. Six had combined sore mouth and hair loss, four had sore mouth and skin erosions, and one had sore mouth, skin erosions, hair loss, leucopenia, and temporary intensification of the skin lesions. Mild diarrhea occurred in only one patient on Schedule III (0.5 mg. daily for 12 days). No alarming toxic effects took place with any schedule except Schedule IV (0.5 mg. twice daily for 6 days).

The discouraging tendency for the psoriatic lesions to recur after treatment points to the need for investigation of minimal dosages of Aminopterin continued for long periods of time. This has been done in a few instances as follows: Over 30 mg. have been given to each of 11 patients, in an average period of 6 to 8 months (as long as 30 months in one instance). The largest single total dose was 51 mg. given in 6 months. Nine of the eleven patients have had fairly good control of their lesions, even though they were re-treated only after some clinical relapse was evident. Excellent control has been maintained in four of these eleven patients by repeated administration of small doses, such as in Schedule II, with rest periods of 2 to 4 weeks between courses.

Complete remission lasting three months or more occurred in 19 patients after one, two, or three courses of treatment, and at least one of these more lasting results occurred with each of the five treatment schedules. Of these 19 patients, 7 had complete remissions for 5 months or more. The longest follow-up of a complete remission is 2 years.

Topical therapy with 1% Aminopterin cream produced no benefit in 12 patients.

Generalized involvement was present in 36 patients. With all schedules totaled, 14 experienced clearing of their lesions, 20 were much improved, and 2 were unimproved.

Nail involvement cleared in one patient each on Schedules III and IV. Four were improved on Schedule III. Palms, soles, or both cleared on Schedule II in 2 patients, in one each on Schedules III and V., and, in four, were improved on Schedule III. Associated arthritis of rather severe degree was much improved in 2 patients on Schedule IV.

Resistance of lesions to repeated courses of therapy after lesions had previously cleared then relapsed, was difficult to determine. The ever-decreasing response to Aminopterin of acute leukemia of childhood may have a counterpart in psoriasis because, theoretically, the more resistant epithelial cells may displace those permanently eliminated from reproduction. Evidence of resistance to repeated courses was noted in 6 patients, but 21 responded well to each of several repeated courses, or information regarding resistance was not available. (Rees, R. B., Bennett, J. H., Bostick, W. L., Aminopterin for Psoriasis: Arch. Dermat., 72: 133-140, August 1955)

Long-Term Acetazoleamide in Glaucomas

The lowering of intraocular pressure by the systemic administration of acetazoleamide (Diamox) and other carbonic anhydrase inhibitors has stimulated rather widespread interest in the use of these agents in the therapy of the glaucomas.

Considerable evidence has been accumulated to suggest that the mode of action of these pressure-lowering agents is a partial suppression of secretion of the aqueous humor. This hypothesis was based primarily upon tonographic and fluorescein-appearance-time date. Thus, acetazoleamide induced a fall in intraocular pressure without change in facility of outflow and associated with a delay in the appearance of fluorescein.

There is general agreement that short-term acetazoleamide administration is a most effective adjunct to other means of therapy in the treatment of the acute primary and secondary glaucomas. Thus, satisfactory lowering of intraocular pressure was reported in approximately 85% of a consecutive series of 380 eyes suffering from various types of glaucoma.

The present study was undertaken in order to obtain more information about ocular and systemic toxicity, as well as the effectiveness of such therapy. The observation now appears to be firmly established that selected patients with otherwise uncontrolled glaucoma can be maintained on acetazoleamide for periods of over 18 months without loss of vision or field and without significant systemic or ocular toxicity. Unfortunately, this is not true for all patients suffering from glaucoma. This report summarizes the results of an attempt to maintain 70 patients with uncontrolled chronic glaucoma on around-the-clock acetazoleamide for periods of over 6 months.

From the results in this series, it is clear that the intraocular pressure of some patients with otherwise uncontrolled chronic glaucoma can be brought under control by the addition of acetazoleamide to their therapeutic regimen. This is in good agreement with the tentative conclusions drawn from a similar study in progress at the Wilmer Institute. Although no significant toxicity has been noted in patients after more than 15 months of therapy, the effects of continuous carbonic anhydrase inhibition over periods of many years still needs elucidation. Therefore, this form of therapy must be considered experimental and can be advocated only in reliable patients who can be carefully followed and observed for possible untoward side-effects, both ocular and systemic. The authors reemphasize the fact that acetazoleamide does not attack the basic disorder of glaucoma, that is, the obstruction to outflow, but is merely a limited means of lowering intraocular pressure by partial suppression of secretion. Therefore, acetazoleamide should not be substituted for measures designed to improve outflow (e. g., miotics or surgery), but merely used as a supplement to such therapy.

Major efforts are needed toward overcoming or avoiding the unpleasant side-effects of acetazoleamide which occurred in four out of every five patients and which necessitated discontinuing therapy in one out of four patients in this series.

Therefore, it may be concluded that long-term acetazoleamide administration may be added cautiously to the therapeutic regimen of patients with otherwise uncontrolled glaucoma. However, its use should be restricted to those who can be followed closely and who can be maintained normotensive at tolerated doses of acetazoleamide. (Becker, B., Middleton, W. H., Long-Term Acetazoleamide (Diamox) Administration in Therapy of Glaucomas: Arch. Ophth., 54: 187-192, August 1955)

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First Naval Dental Corps Commodore Promoted to Rear Admiral

Commodore G. C. Paffenbarger, DC USNR, an outstanding Naval dental officer and an internationally known dental research authority, was promoted on 31 August 1955 to the grade of Rear Admiral in the Naval Reserve. Admiral Paffenbarger was appointed Commodore in the Naval Reserve in November 1945, and had enjoyed, until promoted, the unique distinction of being the first and only dental officer with that rank.

Admiral Paffenbarger received his appointment in the office of Rear Admiral R. W. Malone, DC USN, Chief of the Dental Division, Bureau of Medicine and Surgery. Admiral Malone presented the new flag officer with his appointment at a ceremony witnessed by Rear Admiral B. E. Bradley, MC, USN, Deputy Chief of the Bureau of Medicine and Surgery; Captain C. E. Allen, Staff Dental Officer of the Potomac River Naval Command; several members of Reserve Dental Officer Company W-1, Potomac River Naval Command; and members of the Dental Division staff. Captain C. M. Wheeler, Head of the Dental Reserve Branch, Bureau of Medicine and Surgery, pinned new shoulder bars on the newly appointed Admiral.

In the science of dental materials, Admiral Paffenbarger is considered a world authority; his published reports have been quoted in practically every foreign dental journal. In addition to approximately fifty reports on dental materials, he is coauthor of a book with Wilmer Souder, entitled "The Physical Properties of Dental Materials." Admiral Paffenbarger has served as consultant in dental research to the U. S. Public Health Service, and is presently the Senior Research Associate of the American Dental Association and the National Bureau of Standards, Washington, D. C. (TIO, BuMed)

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Redesignation of Certain Infirmaries as Station Hospitals

SecNav Notice 5450, dated 27 April 1955, redesignated the following medical treatment facilities as "Station Hospitals:"

U.S. Naval Air Station, Quonset Point, R.I.
U.S. Naval Submarine Base, New London, Conn.
U.S. Naval Air Station, (LTA), Lakehurst, N.J.
U.S. Naval Air Station, Patuxent River, Md.
U.S. Naval Air Station, Chincoteague, Va.
U.S. Marine Corps Air Station, Cherry Point, N.C.
U.S. Marine Corps Air Station, Miami, Fla.
U.S. Naval Air Station, Hutchinson, Kan.
U.S. Naval Air Station, (North Island), San Diego, Calif.
U.S. Naval Construction Bn Center, Port Hueneme, Calif.
U.S. Naval Ordnance Test Station, China Lake, Calif.
U.S. Marine Corps Supply Center, Barstow, Calif.
U.S. Naval Ammunition Depot, Hawthorne, Nev.
U.S. Naval Air Station, Whidbey Island, Oak Harbor, Wash.
U.S. Naval Station, Tongue Point, Astoria, Ore.
U.S. Naval Station Kwajalein, Marshall Is.
U.S. Naval Station, Kodiak, Alaska
U.S. Naval Station, Adak, Alaska
U.S. Naval Station, Sangley Point, Philippine Is.
U.S. Naval Station, Subic Bay, Philippine Is.
Fleet Activities, Sasebo, Japan
U.S. Naval Air Station, Atsugi, Japan
U.S. Naval Station, Argentia, Newfoundland
U.S. Naval Air Facility, Port Lyautey, French Morocco
Commander Subordinate Command, U.S. Naval Forces, Eastern Atlantic and Mediterranean/Commander Headquarters Support Activities, Naples, Italy

The medical treatment facilities which are hereby redesignated remain in their present status as components of medical departments of the activities to which they are attached, with a Senior Medical Officer in charge. The present change of designation involves no change in existing management control or command relationships. The fiscal management, personnel allocations, and reporting requirements currently in effect will not be altered. Technical control remains with the Bureau of Medicine and Surgery.

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Manual of the Medical Department, Part I Correspondence Course

The Medical Department Correspondence Course, Manual of the Medical Department, Part I, NavPers 10708, is now ready for distribution to eligible regular and reserve officer and enlisted personnel of the Medical Department. Applications for this course should be submitted on form NavPers 992 (Rev 10-54) and forwarded via appropriate official channels to the Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md.

This is an objective type course designed to allow Medical Department personnel to familiarize themselves with the functions of administration, organization, and management of facilities under the cognizance of the Bureau of Medicine and Surgery.

In matters of administration, the Medical Department is guided by Navy Regulations, current Bureau of Medicine and Surgery directives, and the Manual of the Medical Department, therefore, certain chapters of the Manual of the Medical Department have been included as the principal text for the course. The material embraces authoritative methods and procedures and discussions of approved essential organizational structure of the Medical Department components from the Bureau of Medicine and Surgery, the various field agencies in all areas of activities through the regional and naval district medical staff, to the medical department organization in ships and on shore stations.

Completion of this course will enable the student to acquire essential knowledge of the significant functions of the Medical Department in its relation to the Naval Establishment ashore and afloat in all of its far-flung activities and increase his or her over-all efficiency.

This course consists of ten (10) objective question type assignments and is evaluated at twenty-four (24) Naval Reserve Promotion and Non-disability Retirement Points. (Naval Medical School, NNMC, Bethesda)

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Pharmacy and Materia Medica Correspondence Course

The Medical Department Correspondence Course, Pharmacy and Materia Medica, NavPers 10999, was made available to Medical Department personnel in May 1953. To date, 2224 officers and enlisted personnel have enrolled in this course.

This correspondence course on the subjects of Pharmacy and Materia Medica is designed for officers and enlisted members of the Medical Department of the United States Navy and Naval Reserve. The Pharmacy

section provides information regarding pharmaceutical procedures, preparations, pharmaceutical arithmetic, and prescription. The section on Materia Medica furnishes information regarding the origin, composition, and properties of medicinal substances, and embraces such subjects as pharmacognosy, pharmacy, pharmaceutical chemistry, pharmacology, therapeutics, posology, and toxicology. Although not a complete treatise on Pharmacy and Materia Medica, it does contain enough of the fundamentals of these subjects, not normally encountered in the day-to-day activities of Medical Department personnel, to help them perform their duties more efficiently, to serve as a foundation for further study, to increase Hospital Corpsmen proficiency for advancement in rate, and to awaken a deeper appreciation of their professional responsibilities. Officer personnel should encourage all Hospital Corps personnel to enroll in this Medical Department correspondence course.

The completed course consists of eight (8) objective question type assignments and is evaluated at twenty-four (24) Naval Reserve promotion and non-disability retirement points. Naval Reserve personnel who have completed this course will not receive additional credit for retaking this course.

Regular Navy personnel, satisfactorily completing this course, will receive a letter of satisfactory completion. Copies of satisfactory completion letters are placed in appropriate official Navy records. (Naval Medical School, NNMC, Bethesda)

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From the Note Book

1 Rear Admiral B. W. Hogan, MC USN, Surgeon General of the Navy, attended the dedication of the first unified military hospital to serve all branches of the Armed Forces, at Elmendorf Air Force Base, Anchorage, Alaska, Sept., 4, 1955. The ceremonies opening the 400-bed hospital were also attended by Dr. Frank Berry, Assistant Secretary of Defense for Health and Medical; Major General S. B. Hays, Army Surgeon General; and Brigadier General E. L. Maxwell, Alaskan Air Command Surgeon. Major General D. C. Ogle, Air Force Surgeon General, was the principal speaker. (BuMed Info.)

2 Rear Admiral H. L. Pugh, MC USN, was elected Chairman of the Military Medicine Section of the American Medical Association at the recent AMA meeting in Atlantic City, N. J. Admiral Pugh succeeds Major General I. S. Ravdin, USAR (MC), as Chairman. Captain C. L. Andrews, MC USN, Director of the Professional Division, Bureau of Medicine and Surgery, was elected Secretary of the Military Medicine Section. (TIO, BuMed)

3 Captain B. F. Avery, MC USN, Director, Publications Division, Bureau of Medicine and Surgery, and Director of the Armed Forces Medical Publications Agency, represented the Navy Department at the meeting of the Interallied Committee of Reserve Medical Officers held in Amsterdam, Sept., 11 - 17, 1955. (TIO, BuMed)

4 Captain C. W. Shilling, MC USN (Ret), has been appointed as Special Assistant to the Director for the Division of Biology and Medicine of the Atomic Energy Commission. (U.S. AEC)

5 All Regular officers of the Navy and Naval Reserve officers are reminded that, upon acceptance of each appointment to the next higher grade and upon transfer to a permanent retired list, they are required to have a photograph made for inclusion in their official BuPers record. (B-2210 BuPers Manual) Photographs are required for the purpose of historical record, identification, public information releases, and in connection with the review of records relative to selection for promotion. (TIO, BuMed)

6 An oxygen bottle dolly, which clamps to the legs of the bed and enables movement of the bed without disconnecting the bottle, has been satisfactorily used at the San Diego Hospital for many months. Plans and specifications for this dolly may be obtained from the Commanding Officer, USNH, San Diego, Calif.

7 The Bureau of Medicine and Surgery presented an exhibit entitled, "What is a Safe Driver?" at the meeting of the Utah State Medical Association in Salt Lake City, Sept., 8-10, 1955. The exhibit presents statistics regarding accidents within the military, and the "safe driver inventory" which includes sociological, attitudinal, and personality characteristics of the accident-free and violation-free automobile driver. Also included is the written test developed for the purpose of establishing the above data, and the possible application of this test to selection of both military and civilian motor vehicle operators. A photomantage and slides on serious auto accidents complete the exhibit. (TIO, BuMed)

8 "The Camera in Medicine," a Bureau of Medicine and Surgery scientific exhibit, was shown at the 25th Anniversary Meeting of the Biological Photographic Association held in Milwaukee, Wis., August 30 - September 2, 1955. (TIO, BuMed)

9 Available at all District Publication and Printing Offices, is the Standard First Aid Training Course, NavPers 10081. This book is designed to serve as a basic reference for either individual study or group instruction in first aid procedures. Included are a number of appendices which summarize the essential points of the text and serve as quick reminders in an

emergency. In addition, a new type of edge indexing has been added for the purpose of saving time in locating particular chapters and treatments. (Naval Training Bulletin, July 1955)

10 The use of carbonated beverages at room temperature has been found helpful in the radiography of the kidneys and stomach in infants and children. (J. Pediat., August 1955; B.S. Epstein, M.D.)

11 The preoperative and postoperative care and the operative technic of bilateral adrenalectomy and oophorectomy is described in Am. J. Surg., August 1955; M. Galante, M.D., H.J. McCorkel, M.D.

12 The surgical treatment of tricuspid stenosis emphasized the need for an accurate method of diagnosing this lesion which is difficult to recognize clinically because it is usually overshadowed by mitral stenosis which invariably accompanies it. The diagnosis of tricuspid stenosis is discussed in Am. Heart J., August 1955; Wm. Whitaker, M.D.

13 Seven patients with disseminated coccidioidomycosis were treated with 2-hydroxystilbamidine in dosages of 8 to 23 gm. In five patients, there was evidence of a suppressive effect on the progression of the disease with evidence of persistent low grade infection. Two patients died. Despite the high dosage, no instance of toxicity occurred. Gastrointestinal side-effects were troublesome but subsided on withdrawal of the drug. (Ann. Int. Med., August 1955; I. Snapper, M.D., et al.)

14 A study was made of 336 ovarian tumors in the surgical pathology department of the Los Angeles County Hospital. In terms of decreasing numerical frequency, the tumors which occurred most frequently were serous cystomas, dermoids, mucinous cystomas, thecoma fibromas, adenofibromas, granulosa cell tumor, adenoacanthomas, and Brenner tumors. (Arch. Surg., Aug., 1955; W.K. Bullock, M.D., R.E. Houts, M.D., J.J. Gilrane, M.D.)

15 A summary of available data of radioactive fallout appears in Canadian Services Medical Journal: September 1955; F.C. Pace, M.D.

16 From the data in this report, it is evident that alveolar-cell carcinoma is a rare and highly malignant form of cancer which terminates fatally within 2 or 3 years. It is a tumor which cannot be diagnosed often enough in its early stages to permit early and successful attack. So far, surgery is the only treatment for prolonging and saving life. (J. Thoracic Surg., August 1955; H.R. Decker, M.D.)

Board Certifications - Inactive Duty Officers

American Board of Internal Medicine

LT Edwin F. Aune (MC) USNR
LTJG George E. Bock (MC) USNR
CDR Walter B. Burwell (MC) USNR
LT James R. Clarkin (MC) USNR
LT Saul J. Farber (MC) USNR
LT Harold W. Jayne (MC) USNR
LTJG Walter C. Klingensmith (MC) USNR
LT Irwin H. Krakoff (MC) USNR
LT Richard P. Levy (MC) USNR
LT John W. Littlefield (MC) USNR
LTJG George D. Ludwig (MC) USNR
LTJG David P. McCallie (MC) USNR
LT Eugene J. Morhous (MC) USNR
LTJG Edward W. Mullin (MC) USNR
LT John L. Read (MC) USNR
LT Carmen J. Scarpellino (MC) USNR
LTJG Joseph H. Schaffer (MC) USNR
LTJG Melvin H. Shaffer (MC) USNR
LT Cheves M. Smythe (MC) USNR
LTGJ James W. Wainright (MC) USNR
LT Benjamin B. Weisiger III (MC) USNR

American Board of Radiology

LT Howard J. Barnhard (MC) USNR
LT Norman F. Stone (MC) USNR

American Board of Surgery

CDR John J. Keenoy (MC) USNR
CDR Thomas F. Wright (MC) USNR

American Board of Urology

LTJG Gordon A. Nicoll (MC) USNR

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Recent Research Projects

Naval Medical Research Institute, NNMC, Bethesda, Md.

1 Thermal Radiation Burns in Rabbits. III. The Use of Radioactive Phosphorus (p^{32}) to Measure the Severity or Radiant Energy Burns to the Rabbit Ear. NM 007 081.03.06, 31 December 1954.

2 Serologic Reactions in Schistosoma Mansoni Infections. I. Cercaricidal, Precipitation, Agglutination, and CHR Phenomena. NM 005 048.02.32, 5 February 1955.
3 The Significance of Plasma Corticosteroids as a Measure of Adrenal Cortical Function. Lecture and Review Series No. 55-1, 5 February 1955.
4 Filariasis in American Samoa. V. Bionomics of the Principal Vector, Aedes polynesiensis Marks. NM 005 048.08.05, 10 February 1955.
5 The Effect of Population Size on the Weights of the Reproductive Organs of White Mice. NM 004 005.08.02, 22 March 1955.
6 Lucite Demineralizing Chamber for Use with Time Interval Photographic Studies. Memorandum Report 55-1, related to NM 008 012.01, 25 March 1955.
7 Description of a Plastic Mouse Restraining Case. Memorandum Report 55-2, Related to NM 005 048.02, 29 March 1955.
8 Adrenal Cortical Function in Experimental Shock, Measured by Adrenal Venous Blood Corticosteroid Secretion, NM 007 081.22.01, 29 March 1955.
9 Nonsuture Blood Vessel Anastomosis. An Experimental Study Using Polyethylene as the Prosthetic Material. NM 007 081.19.01, 29 March 1955.
10 The Nature of the Psittacosis-Lymphogranuloma Group of Microorganisms. Lecture and Review Series, No. 55-2, 18 April 1955.
11 The Stimulative Effect of Acetylcholine on the Adrenocortical Function of Isolated Perfused Calf Adrenals. NM 006 012.04.85, 2 May 1955.
12 The Relative Biological Effectiveness of Atomic Bomb Gamma Radiation in Mice. NM 006 012.04.86, 25 May 1955.
13 A Study of the O Antigenic Relationship of 21 Bacillus Columbensis Strains and 121 Kauffmann Group O Coliforms. NM 005 048.04.18, 9 May 1955.
14 The Dental Caries and Rate of Growth in Three Strains of White Rats. NM 008 012.01.13, 10 May 1955.

Naval Dental School, NNMC, Bethesda, Md.

1 Classification of Microorganisms from the Pulp Canal of Nonvital Teeth. NM 008 015.10.01. 1 August 1955.

Naval Medical Research Unit No. 3, Cairo, Egypt

1 A Comparative Study of Human Serum and Salivary Antibody Titers in Cases of Brucella Melitensis Infections. NM 005 050.53.01.
2 The Liver and Protein Nutrition. NM 007 082.26.01. I.
3 Results of the Namru-3 Southeastern Egypt Expedition, 1954. Reptiles and Amphibians. NM 005 050.39.40.
4 The Therapy of Epidemic Typhus with the Newer Antibiotics. NM 007 082.12.05.

Naval Medical Research Unit No. 4, Great Lakes, Ill.

1 Studies in Streptococcal M Protein Antibody and Its Relation to Immunity. NM 005 051.21, 5 April 1955.

Naval Air Development Center, Johnsville, Pa.

1 Effect of Pain on Simultaneous Perception of Non-painful Stimulation. NM 001 103.301. Report No. 5 (Formerly NM 001 090.04), 12 July 1955.

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BUMED INSTRUCTION 6150.17 15 August 1955

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Corps Personnel Regularly Assigned

Subj: Identification of x-ray film

This instruction establishes minimum identification requirements for all medical x-rays (excluding 35 mm. and 70 mm. photofluorograms).

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BUMED INSTRUCTION 6710.18 17 August 1955

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Defective medical and dental material; authority for disposition of

Ref: (a) Medical and Dental Material Bulletin, Edition No. 56, dtd 1 July 1955
(b) Art. 25-21, ManMedDept

This instruction provides authority for the disposal of defective material listed in paragraph V of reference (a).

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BUMED INSTRUCTION 6200.8 18 August 1955

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Corps Personnel Regularly Assigned

Subj: Occupational dermatitis

Encl: (1) List of Personal Preventive Measures
(2) List of Approved Protective Hand Creams

This instruction emphasizes the need for preventive measures which will reduce non-effectiveness due to a high incidence of occupational dermatitis in both military personnel and naval civilian employees.

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BUMED NOTICE 6320 25 August 1955

From: Chief, Bureau of Medicine and Surgery
To: All Stations Having Medical/Dental Personnel Regularly Assigned

Subj: Ch-2 to BuMedInst 6320.4B, Subj: Hospitalization and subsistence rates for fiscal years 1955 and 1956

This notice is a change in the interdepartmental hospitalization rate.

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BUMED INSTRUCTION 6230.1 SUP-2 26 August 1955

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Immunization of Navy and Marine Corps personnel and other adults against tetanus

Ref: (a) Chapter 22, Articles 22-24 and 22-29, ManMedDept USN
(b) BuMedInst 6230.1 of 5 Nov 1952

This instruction provides interim instructions on the use of combined tetanus and diphtheria toxoids to replace plain alum precipitated tetanus toxoid in primary and booster immunization against tetanus in adults, pending revision of reference (a) and tri-Service revision of reference (b).

MEDICAL RESERVE SECTION

Regular Navy and Reserve Hospital Corpsmen Correspondence Course Program

Enlisted correspondence courses are comprehensive home study courses, designed to assist all hospital corps personnel preparing for advancement in rating examinations, and at the same time to permit Reserve personnel to earn valuable credits toward non-disability retirement. When an enlisted hospital corpsman enrolls in a correspondence course, he is furnished the following material: textbook, assignment booklet, and answer sheets. The assignment booklet contains suggestions for getting the most out of the textbook, plus a number of assignments consisting of readings in the textbook and multiple-choice questions on these readings. For each assignment in a course, there is an answer sheet upon which is recorded answers to the multiple-choice questions. As each assignment is completed, the marked answer sheet for that assignment is returned to the Correspondence Course Center for grading. Assignments should be completed at a rate of not less than one per month.

When the correspondence course is successfully completed, the individual receives a Completion Certificate and an appropriate number of retirement points are to be recorded in his service record.

Enlisted correspondence courses available to hospital corps personnel are of four categories: (1) basic and general courses available to all enlisted personnel; (2) those courses, based upon Navy training courses as texts, which qualify individuals for advancement to the next higher rating; (3) basic and general courses for officers available to qualified enlisted personnel who are potential officer candidates; and (4) professional courses administered by the Bureau of Medicine and Surgery available to qualified enlisted personnel.

Basic and general courses administered by the Bureau of Naval Personnel with retirement points listed are:

General Training Courses for Petty Officers	NavPers 91203-A -20
This is Your Navy	NavPers 91208-1 - 33
Ship Activation Manual	NavPers 91215 - 12
Uniform Code of Military Justice	NavPers 10971 - 4

Mathematics Volume I	NavPers 91219-A - 21
Mathematics Volume II	NavPers 91220 - 14
Advanced Mathematics Volume I	NavPers 91221 - 13
Blue Jackets' Manual	NavPers 91205 - 48
Chemical and Biological Warfare Defense	NavPers 91211 - 13
Survival in the Water	NavPers 91218-1 - 12

BuPers Instruction 1414.2A of 11 April 1955, states that satisfactory completion of an applicable Navy training course for advancement in rating may be accomplished by passing the enlisted correspondence course based on the Navy training course. Because the following enlisted correspondence courses are based upon Navy training courses as texts, the successful completion of any of the below courses will be evidence that the individual has completed the required Navy training course and such completion will be appropriately entered in the service record. In addition, these courses earn retirement points as listed:

Handbook of the Hospital Corps	NavPers 91666-A - 39
Handbook for Hospital Corpsmen 3	NavPers 91668 - 36
Handbook for Hospital Corpsmen 2	NavPers 91669 - 33
Handbook for Hospital Corpsmen 1 & C	NavPers 91670 - 30

Basic and general courses for officers available to Chief Petty officers and qualified enlisted personnel, so recommended by their unit commanding officer or District Commandant as potential officer candidates, are:

Navy Regulations	NavPers 10740-A - 24
Naval Orientation	NavPers 10900-1 - 24
Nucleonics for the Navy	NavPers 10901 - 24
Logistics	NavPers 10902 - 12
Leadership	NavPers 10903 - 10

Naval Arctic Operations	NavPers 10946 - 10
Industrial Management	NavPers 10947 - 20
Education and Training, Part I	NavPers 10965 - 14
Education and Training, Part II	NavPers 10966 - 10
Personnel Administration	NavPers 10968 - 12
Welfare and Recreation	NavPers 10969 - 24
Administration of Officers Messes	NavPers 10970 - 12
Security of Classified Matter	NavPers 10975 - 6
Military Justice in the Navy, Parts I & II	NavPers 10993 - 24

Requests for enrollment in the above courses are made to the U. S. Naval Correspondence Course Center, Building RF, U. S. Naval Base, Brooklyn 1, New York.

The following professional courses, administered by the Bureau of Medicine and Surgery, are available to enlisted hospital corpsmen so recommended by their unit Commanding Officer or District Commandant:

Medical Department Orientation	NavPers 10943 - 12
Functions of Officers of the Medical Dept.	- 12
Naval Preventive Medicine	NavPers 10703 - 24
Insect, Pest, and Rodent Control	NavPers 10705 - 18
Combat and Field Medicine Practice	NavPers 10706 - 24
Clinical Laboratory Procedures	NavPers 10994 - 24
Tropical Medicine in the Field	- 32
Submarine Medicine Practice	NavPers 10707 - 24
Aviation Medicine Practice	NavPers 10912 - 24
Radiological Defense and Atomic Medicine	NavPers 10701 - 32

Frigid Zone, Medical & Dental Practice	NavPers 10997 - 12
Pharmacy and Materia Medica	NavPers 10999 - 24
Special Clinical Services (Blood)	NavPers 10998 - 24
Manual of the Medical Department, Part I	NavPers 10708 - 24
Manual of the Medical Department, Part II	NavPers 10709 - 18

Requests for enrollment in these courses are made to the Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda, Md.

Enlisted personnel of the Naval Reserve, entitled to retirement point credits, will be awarded such credit only upon successful completion of the correspondence course. The points for each course will be prorated by assignment and the point or points for an assignment will be credited as of the date the assignment is completed, but only after the successful completion of the course as a whole. The date an assignment is considered completed is the date on which the completed satisfactory work on the assignment is deposited in the mails.

Retirement point credits can not be credited for courses taken while on active duty, assignments completed while on annual training duty, or for assignments completed during drill periods. Normally, enlisted Reservists will not be permitted to enroll in more than one course at a time.

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Course in Medical Military Training for Reserve Medical Department Officers

The twenty-third course in Medical Aspects of Special Weapons and Radioactive Isotopes for active and inactive Regular and Reserve Medical Department officers is scheduled to convene at the U.S. Naval Medical School, National Naval Medical Center, Bethesda, Md., Monday, 3 October 1955, and will continue to Saturday, 15 October 1955. The course is designed for all officers of all corps of the Medical Department and can accommodate approximately 140 officers for each class.

The first week of instruction will be devoted to Medical Aspects of Special Weapons and Radioactive Isotopes with particular reference to personnel casualties from atomic explosions. During the second week, professional and administrative topics of concern to military medicine will be presented, including a symposium on Reserve Medical Programs.

Inactive Reserve Medical Department officers, who desire to attend this course, should submit their request for fourteen days' training duty to their Commandant's office at the earliest practicable date. Messing facilities are available. BOQ facilities are limited and will be available on a first-come, first-served basis.

The Commandants of the First, Third, Fourth, Fifth, Sixth, Eighth, and Ninth Naval Districts and Potomac River Naval Command have each been assigned a quota for this course. Officers of the Medical Department on active duty may be given "authorization orders" (at no expense to the Government). All orders should direct reporting to the Commanding Officer, U.S. Naval Medical School, NNMC, Bethesda, Md., prior to 1600 Sunday, 2 October 1955; officers will be detached on Saturday morning 15 October 1955. All officers availing themselves of this training are requested to assure that an advance copy of orders issued be forwarded to the reporting activity as early as possible.

Security clearance is not required.

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New Medical Department Correspondence Course - "Clinical Laboratory Procedures"

The new Medical Department correspondence course, Clinical Laboratory Procedures, NavPers 10994, is now ready for distribution to eligible regular and Reserve officers and enlisted personnel of the Medical Department.

This course is of the objective question type, designed to furnish enrollees a concise guide and ready reference to intricate clinical laboratory procedures. It provides information by which Medical Department personnel may acquaint and familiarize themselves with the latest methods and most efficient steps to follow in the performance of various clinical laboratory and biochemistry procedures. The clinical laboratory and biochemistry procedures contained in this course are for use in the field as well as in Naval hospital laboratories.

Consisting of eight objective question type examinations, it is evaluated at 24 promotion and non-disability retirement points. Applications for this course should be submitted on Form NavPers 992 and forwarded via appropriate official channels to Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda, Md.

Reservists, who satisfactorily completed the earlier thesis question type course of the same title, will not receive additional credit for this course.

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Appointment in the Regular Navy Medical Corps

As outlined in BuPers Instruction 1120. 3C of 10 August 1955, applications for appointment in the Medical Corps of the regular Navy are desired from Naval Reserve officers serving in the grades of Lieutenant (junior grade) and Lieutenant under the ages of 34 and 37, respectively, and officers serving in the grade of Lieutenant Commander who graduated from medical or dental school not more than thirteen years prior to submission of application, and are under 42 years of age.

Applicants on inactive duty will apply at the nearest Navy Recruiting Station and Office of Naval Officer Procurement for processing of their applications for appointment.

Applicants on active duty should submit letter requests for consideration to the Chief of Naval Personnel (Pers - B6221) via their commanding officers. The request should be accompanied by a special report of fitness (NavPers 310) two copies of a report of medical examination (SF 88), and a report of medical history (SF 89). The physical examination must be conducted by two medical officers and, if possible, one dental officer.

A written professional examination will not be required. The grade in which appointments will be offered will be determined by the applicant's length of professional experience, age, professional training, and attainments. It will normally correctly approximate the grade and date of rank held in the Naval Reserve.

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PREVENTIVE MEDICINE SECTION

Discontinuance of Port Sanitary Statements

The Division of Foreign Quarantine, Public Health Service, U. S. Department of Health, Education, and Welfare, has recently informed the Bureau of Medicine and Surgery that many ships still continue to request a "Port Sanitary Statement" ("Bill of Health") from port authorities and quarantine officials. General Order No. 20 is cited by those making such requests as requiring that this particular statement be obtained by naval vessels.

Part VI, Article 89, of International Sanitary Regulations (WHO Regulations No. 2), April 1952, states that "Bills of health, with or without consular visa or any certificate, however designated, concerning health conditions of a port or airport shall not be required from any vessel or aircraft." Because most countries, which may presently be visited by American ships or aircraft, have agreed to abide by these regulations, there is little possibility of authorities at a port of arrival requiring a written statement from authorities at a port of departure. Accordingly, the Division of Foreign Quarantine canceled the "Port Sanitary Statement" and none have been issued since January 1955.

General Order No. 20, Section II, Part I, does require that the commanding officer of a ship obtain information concerning communicable disease conditions existing ashore prior to departure "whenever the possibility exists that a quarantine declaration may be required" at the port of arrival. It does not specify that any particular form or type of written statement be obtained from port authorities or quarantine officials prior to departure and can not be construed as requiring such.

As a matter of policy, any naval ship visiting any port must inquire as to the prevalence of communicable diseases in the port area. If not available through military authorities, this information can be obtained usually from local quarantine or public health authorities and is often issued in the form of a bulletin. Medical officers and medical department representatives have the responsibility of advising their commanding officer of any condition ashore which may adversely affect the health of the crew. Further, in the filing of a "Quarantine Declaration" as required by Section II, Part II of General Order No. 20, specific statements must be made about communicable disease conditions in all ports visited within a 30- to 60-day period.

In short, the "Bill of Health" has been discontinued and will no longer be obtainable by naval ships, but this has not relieved ships of the responsibility for obtaining the information required in General Order No. 20.

(The above information is not in conflict with the statements made in respect to Quarantine Regulations for Naval Vessels and Aircraft of the Armed Forces which were reprinted in the May 27, 1955 issue of the Medical News Letter, since these statements were quoted from the "ComServPac Information Bulletin Cumulative Edition, 1953" at which time Port Sanitary Statements were still being issued.)

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Cancer of the Skin and Melanoma

Malignant lesions, arising in the dermis and appendages, may assume many different appearances. The naval industrial medical officer or civilian physician is confronted, first, with the problem of diagnosis and, secondly, with the problem of what advice to give the patient once diagnosis is determined.

Errors in diagnosis, failure to make a diagnosis of a skin lesion in the presence of another illness, and the tendency to ignore the premalignant dermatoses, as well as the choice of inappropriate and inadequate treatment, all contribute to the high mortality rate in the United States from malignant tumors of the skin.

Early diagnosis and prompt and appropriate treatment afford the best prognosis. This is especially true in treating premalignant dermatoses.

In attempting a clinical diagnosis, it is important to expose the entire skin surface. Node-bearing areas should be carefully palpated. The examination should be made in a good natural light and a good history should be taken.

Biopsy is a necessary procedure without which the diagnosis remains a guess and forms a poor basis for rational therapy. The material should be given priority in any pathologist's practice, the examination should be made promptly, and the result reported at once in order to facilitate early and correct treatment.

An apparently benign lesion may, on histologic examination, prove to be a highly malignant tumor requiring radical surgery for its eradication. A malignant melanoma is a notorious example because it may appear relatively benign on clinical examination.

The occupation of the individual should be noted. Personnel exposed to sun have a high incidence of skin cancers on exposed surfaces. Likewise, those exposed to tar, pitch, oils, paraffin, and nitrates may develop skin cancers.

The value of multiple diagnosis and treatment of malignant skin lesions can not be overemphasized. At times, patients with skin cancers or early malignant melanomas are treated for some less important pathologic condition and the malignant lesion is completely ignored.

Treatment. Malignant melanomas should be removed by radical surgical therapy. If the lesion is situated within a reasonable distance of one of the node bearing areas, a block dissection of the tumor, subcutaneous fat, fascia, and lymph nodes of the entire drainage area should be done in continuity. About 20% of patients with palpable nodes will be found to have metastatic disease.

The patient with epithelioma, in general, can be treated either surgically or radiologically with equal good results, provided adequate

surgery is performed and adequate radiation is administered. Metastatic squamous cancer in lymph nodes had best be taken care of by surgical procedures.

The precancerous dermatoses are best treated by preventive measures such as avoiding overexposure to radiant energy, whether it be sunlight or x-rays. The prompt grafting of second degree burns, protection of skin in occupational hazards, and appropriate treatment of chronic ulcers will prevent the formation of epitheliomas that are notoriously difficult to cure. Once the precancerous lesion has occurred, it is probably best to use surgical measures for its eradication because the x-ray or radium dosage necessary to destroy these lesions is usually of sufficient magnitude to produce a radiodermatitis which, in itself, is subject to epitheliomatous degeneration at a later date. (Miller, T.R., Cancer of the Skin and Melanoma: Postgrad. Med., June 1955)

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Surgical Treatment of Lung Cancer Found on X-ray Survey

Asymptomatic lung cancer, discoverable only by x-ray examination, has a higher rate of resectability and a greater potential curability than symptomatic cancer. Pessimism should not deter the search for silent cancer in mass chest surveys and individual chest screening. An effective use of x-ray examination by the medical profession, combined with the intelligent cooperation of the public, will uncover more lung cancers at the time most favorable for cure.

These opinions are supported by the experience of the Overholt Clinic with 30 cases of silent lung cancer seen between December 1947 and April 1951. These cases were compared with a group of 263 symptomatic cancer cases observed during a like period. Seventy-seven percent of the asymptomatic lung cancers, discovered by x-ray screening, and only 38% of the symptomatic cancers, were resectable. There were no known metastases in the asymptomatic cases. Only 15% of the asymptomatic cancers had extended to lymph nodes as against 43% of the other group. Whereas only 12% of the group of patients with symptomatic cancer survived for 3 years, 39% of the silent lung cancer group were alive at the end of a 3-year period.

If periodic x-ray examination is made at reasonably short intervals, suspicious shadows, whether found during mass tuberculosis surveys or on x-ray films taken by individual doctor-patient arrangement, unveil disease in the early stage when it is more amenable to cure. In view of recent publications, it might be wise to give particular attention to male patients over the age of 40 years, especially those who have been avid smokers.

Physicians, interpreting films, must have a suspicious attitude, for lung cancer, even in this silent phase, frequently masquerades as tuberculoma, fibroid tuberculosis, pneumonia, or bronchiectasis. The very presence of a lung lesion without lung symptoms should arouse suspicion of cancer. The authors do not agree with investigators who state that x-ray changes do not precede symptoms in lung cancer. In a 6-year period they had 268 patients who had abnormal pulmonary shadows on x-ray survey and who were asymptomatic at the time of the survey. Of these, 46 (18%) proved to have primary cancer.

The spherical "coin-shaped" lesion is the commonest x-ray appearance in the asymptomatic group. This means simply that the lesion has not extended to occlude a bronchus. Satellite nodules, smooth outline, and lack of demonstrable change over a period of months or even years, do not rule out cancer. Diffuse calcification throughout an x-ray shadow, however, is usually a dependable criterion of a benign lesion.

The key to a higher cure rate is efficiency in selecting and managing patients whose x-ray examinations reveal a lesion suggestive of tumor, whether discovered by survey or otherwise. When any suspicion of lung cancer is aroused, a direct approach to the diagnosis is clearly indicated. Thoracotomy is a valuable early diagnostic procedure when exact diagnosis cannot otherwise be made. The patient's comfort should not be disturbed, nor should time and money be wasted on extensive searches for possible primary sites of cancer unless symptoms or physical findings suggest a site. The Papanicolaou Test has been accurate in only three out of four verified lung cancers, even in the hands of the most experienced investigators. Used by inexperienced technicians, it is worthless as a guide. A negative cytologic test of sputum and bronchial secretions does not rule out the necessity of chest exploration, and a positive test demands exploration. A reasonable search for acid-fast bacilli may be justified when there is a real suspicion of tuberculosis. However, the usually silent "coin" lesion, whether granulomatous or neoplastic, is better removed. Delays of 8 weeks while sputum cultures or guinea pig inoculations are awaited are not justified.

Bronchoscopy, like sputum study, is valuable for diagnosis only when positive and, in silent lesions, is rarely successful diagnostically. Its most helpful function, as a preliminary to contemplated thoracotomy, is to inspect the air passages for gross evidence of nonresectability. In the authors' experience, a patient suspected of having lung cancer is admitted to the hospital usually one or two days before operation. Unless clinical evaluation of x-ray study gives evidence that resectability is doubtful, bronchoscopy is performed under topical anesthesia immediately before exploration of the chest. Patients with lesions, which in x-ray or clinical study appear to be advanced, are bronchoscoped a day or two in advance of the date planned for thoracotomy.

The plan of surgical management proceeds from bronchoscopy to incision. Histologic diagnosis is the first concern. Tissue for this diagnosis may be obtained from enlarged lymph nodes or by resection of the lesion. In patients with small superficial lesions, a wedge resection may be safe. In larger or deeper lesions, a segmental or even lobar resection is performed. Biopsy by direct incision into a lesion is less desirable because of the danger of implanting tumor cells. A frozen section is examined histologically. If the resected lesion is benign, the thorax is closed. If it is malignant, appropriate lobectomy or pneumonectomy is completed. (Overholt, R. H., Bougas, J. A., Wood, F. M., Surgical Treatment of Lung Cancer Found on X-ray Survey: New England, J. Med., March 17, 1955)

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Insect Repellent M-1960, Clothing Application

On June 14, 1955, the Armed Forces Epidemiological Board issued the following recommendations concerning the new insect repellent M-1960:

1 "That insect repellent M-1960 be used for clothing treatment to the extent required by military operation, provided: that treatment is carried out by accepted methods and only to the extent recommended in current directives; and that uniforms be properly dried following treatment and prior to being worn."

2 "That in view of field and other experience now available, further field treatments are not necessary at this time."

These recommendations are based on conclusions drawn from present and previous reports, as well as from extensive laboratory work, that use of M-1960 as an insect repellent under the conditions encountered in military operations should not cause systemic injury to personnel wearing treated uniforms.

This AFEB statement results from a re-evaluation of M-1960 following reports from the field of repellent-induced dermatitis. In this connection, the Board concludes that dermatitis may still be a problem where clothing has been overimpregnated. However, where clothing is treated properly, the incidence of dermatitis should be no greater than that caused by uniforms treated with previously accepted repellents.

At the present time M-1960 is not available from Navy General Stores. However, a recommendation that it be made available through these channels was issued at the recent conference of military entomologists.

Food Poisoning Caused by Metals

Food poisoning may be caused not only by bacterial activity but also by contamination of foods with poisonous metals. Most outbreaks of metallic poisoning are caused by carelessness of food service personnel, or unfamiliarity with the fact that toxic products are formed by chemical reactions between certain foods and metals. Violent nausea, vomiting, pain, and diarrhea occur almost immediately after ingestion of the contaminated food.

A recently reported outbreak of this type was caused by the serving of concentrated orange juice mixture from a vacuum food container from which the inserts had been removed. The inner liner was analyzed and was found to contain cadmium, iron, and aluminum. It is evident that the acids in the orange juice set up a chemical reaction with the cadmium resulting in a highly toxic product.

The Manual of Naval Hygiene and Sanitation furnishes information concerning undesirable metallic coatings of food and beverage containers that are used for preparing, serving, and storing food, and forbids the use of containers that are lined with, or have been repaired with, cadmium.

Current Military Specifications require that the inner shell of vacuum food containers be made of corrosion-resistant steel. This precludes the contamination of food by metals even though the inserts are removed. However, it is apparent that some of the old-type containers are still in use and the cadmium liner continues to be a potential health hazard.

Medical Department representatives are urged to be on the alert for these old-type food containers that do not meet current military specifications and to initiate action with the proper authority to prevent their continued use.

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Coin-Operated Sandwich Vending Machines

The vending machine is gradually becoming a recognized method of holding and serving sandwiches. The mode of preparing sandwiches, the types of filler used, and the methods of handling sandwiches render them one of the potentially dangerous foods. It follows that strict sanitary control of sandwich-vending machines must be maintained.

An instruction governing the preparation, handling, and serving of sandwiches will be forthcoming at an early date. Pending promulgation of this instruction, the following recommendations of the Armed Forces Epidemiological Board with respect to the use of sandwich-vending machines are offered as a guide for medical officers and other responsible Medical Department personnel:

1 Both the preparation of the sandwiches and the refrigerated storage of the product, including the refrigerated compartment of the machines, should be under the supervision of the responsible medical officer as are other food-handling operations.

2 The machines are equipped to stop vending automatically with failure of the refrigerating system. However, it is usually left to the discretion of the financially interested vendor to decide whether the machine is simply to be restarted or whether its valuable contents are to be discarded and replaced with fresh sandwiches. This important decision should rest with the responsible medical officer, not with the vendor. (A rise in temperature of the compartment above 50 degrees for a period of 4 hours or more should make discarding of its contents mandatory.)

3 In order to prevent frequent failures of electrical refrigeration due to passers-by accidentally or intentionally disconnecting the plug, it is recommended that connecting plugs be so secured in place as to prevent unauthorized disconnection.

4 In some machines, the first sandwiches in are not the first sandwiches out. Installation of new machines should not be permitted at military activities until this mechanism is changed so that the first sandwich placed in the machine is the first vended. The following precautionary measures are suggested for continued operation of machines already installed: Dated sandwiches only should be used, with the date marked conspicuously on the exposed portion of the wrapper; and a representative of the responsible medical officer should acquire ready access to the refrigerated sections of these machines in order to ensure that the older sandwiches are moved to dispensing position when new stock is added.

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Contaminated Water from City Source

An example of alert action by medical department personnel was brought to the attention of the Bureau of Medicine and Surgery by way of a special epidemiological report from a U.S. Naval Reserve Training Center located in a large city.

Routine water analysis, conducted aboard this station, recently showed the drinking water to be grossly contaminated. The water supply for the station originated from the general city water supply system. Immediate steps were taken to inform the proper authority in the County Health Department, with the result that an investigation was made of the public water supply. Bacteriological analysis of samples collected by the

health department confirmed the reports from the station medical department and showed contamination to have originated in the city system. The area of contamination was localized at the site of a recent railroad bridge fire.

As a result of the information obtained from the station, the city was able to correct the condition and take steps to prevent a city-wide outbreak of gastroenteritis. Emergency water measures were put into effect by the medical department at the station concerned.

Although instances of this type are fortunately infrequent, they emphasize the importance of routine bacteriological analysis of water.

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Photofluorography at a U. S. Naval Shipyard

Mass roentgenographic techniques for detecting chest diseases have become increasingly popular in the past decade. The present survey, for the year 1953, was conducted at the New York Naval Shipyard, where chest roentgenograms of all civilian employees have been taken annually since 1949. The primary purpose of the chest survey at this establishment is the detection and control of tuberculosis. The problem is twofold: (1) detection of tuberculosis in applicants for employment; and (2) detection of tuberculosis among employees.

The data below represents a series of 20,379 photofluorograms of civilian production workers and office personnel taken during 1953 at the New York Naval Shipyard. The films are divided into three groups: (1) the annual survey group numbering 18,146; (2) preemployment group, 2161; and (3) separation or retirement group, 72. Not included in this series, is a group of patients periodically followed with 14- x 17-inch films because of lesions discovered on earlier annual surveys. Only patients with previously normal photofluorograms are followed on the annual survey. Only the preemployment group had not had films taken here before.

The 70-mm. photofluorograms are read initially at the Naval Shipyard medical department and subsequently reviewed at the Bureau of Medicine and Surgery. In all doubtful cases, namely, cases in which the true nature of the process can not be clearly defined on the 70-mm. film, a 14- x 17-inch film is taken. These are retained at the Navy Yard for comparison with future films and are not reviewed at the Bureau of Medicine and Surgery.

Abnormalities were found in 9.9% of all photofluorograms. Three percent, or 602 photofluorograms, were sufficiently "suspicious" to warrant repeat filming of the subjects on 14- x 17-inch films. The results of these requested re-exposures were distributed as follows: subjects with nondisqualifying defects, 316; subjects requiring further clinical study, 134;

normal individuals, 115; individuals who were not refilmed because of transfer, separation, or like cause, 37.

In 134 cases, further clinical study was required either to establish more clearly a diagnosis or to elucidate more fully the seriousness of the problem. The clinical follow-up was performed by local hospitals, by chest clinics of local boards of health, and, when a history and physical examination sufficed, by the shipyard dispensary. In a few cases, the private physician did the complete study. The principal diagnoses in this group were:

Tuberculosis, pulmonary, arrested	32
Fibrotic parenchymal or pleural scars of unknown cause	15
Pneumonia	8
Hypertensive cardiovascular disease	7
Pulmonary fibrosis of unknown cause	7
Rheumatic heart disease	6
Pulmonary emphysema	5
Tuberculosis, pulmonary, active	5
Bronchiectasis	3
Congenital heart disease	2
Scoliosis	2
Sarcoidosis	2
Ununited fracture of the clavicle	2
Apical caps	2
Increased bronchovascular markings	2
Carcinoma of the breast, metastatic	2
No evidence of disease	2

There was also one case of each of the following lesions: fibrous dysplasia of the rib, Ghon tubercle, healed peripheral calcifications, pneumoconiosis, large pericardial fat pad, cleidocranial dysostosis, substernal thyroid, spontaneous pneumothorax, bronchogenic carcinoma, diaphragmatic hernia, and bronchial cyst. There was no follow-up in 19 cases. Of the 5 cases of active pulmonary tuberculosis, 3 were detected in the annual and 2 in the preemployment survey. (Guild, W. R., Photofluorography at a U. S. Naval Shipyard: J. A. M. A., 157: 1003-1005, 19 March 1955)

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Immunization Information for International Travel

A supplement to the booklet "Immunization Information for International Travel," Public Health Service Publication No. 384, June 1954, was released early in August by the U. S. Department of Health, Education and

Welfare Public Health Service, Foreign Quarantine Division. This supplement summarizes changes made in immunization requirements and designated yellow fever vaccination centers between June 1954 and June 1955. Medical officers having a 1954 edition of this booklet may obtain copies of the supplement by letter request to the Bureau of Medicine and Surgery.

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Change of Address

Please forward requests for change of address for the News Letter to: Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md., giving full name, rank, corps, and old and new addresses.

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The printing of this publication has been approved by the Director of the Bureau of the Budget, 16 May 1955.

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